

JOURNAL

OF THE

BRITISH SOCIETY OF DOWSERS

Vol. II. No. 15

March, 1937

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BRITISH SOCIETY OF DOWSERS

COUNCIL

President :

COLONEL A. H. BELL, D.S.O., O.B.E.

Address : York House, Portugal Street, London, W.C. 2.

Hon. Secretary and Treasurer :

T. R. WHITLEY, Esq.

Address : White Gates, Lindfield, Sussex.

Miss M. E. Macqueen
Dr. Hector Munro, M.B.

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OBJECTS OF THE SOCIETY

(a) To encourage the study of all matters connected with the perception of radiation by the human organism with or without an instrument.

(b) To spread information amongst members, by means of a journal, lectures and other means, about the use of dowsing for geophysical, medical and agricultural and other purposes and for tracing objects animate or inanimate.

(c) To keep a register of dowsers for water, minerals, oil, and for other purposes.

RULES OF THE SOCIETY

I.—Membership.

The Society is open to all persons interested in radiation-perception.

The Council has power to appoint honorary members.

II.—Subscription.

The subscription is five shillings per annum, or three guineas for a life member.

III.—Management.

The Society will be managed by a Council consisting of a President, who will act as Chairman, and five members, one of whom will act as Treasurer and Secretary.

The President and members will be replaced as necessary by the Council, appointments being confirmed at a General Meeting.

All questions regarding the publication of the journal, lectures, meetings, etc., will be settled by the Council.

Decisions of the Council will be arrived at by correspondence if necessary, the facts being recorded in the Minute Book.

Decisions will be decided by a majority vote, the Chairman having a casting vote.

The Council has power to co-opt other members for special purposes.

IV.—Accounts.

The financial year will be from July 1st to June 30th.

Accounts will be published annually within two months after the end of the financial year.

Accounts will be audited privately.

V.—General Meeting.

A General Meeting will be held annually, and other meetings when considered necessary by the Council.



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EDITORIAL

We much regret to record the death, at the age of 79, of Mr. Benjamin Tompkins, of Thetford, Norfolk, which took place on Monday, December 28th.

Tompkins was one of the foremost water-diviners of his day, and though, like all dowsers, he had his failures, he deservedly acquired a reputation for reliability which has seldom, if ever, been equalled in this country.

He discovered his ability to dowse as quite a young man when farming at Allington, near Chippenham, and ever since then constantly made use of his powers for locating water. In 1896 he was invited to go to South Africa, where he was instrumental in the discovery of several abundant sources of water in a country which was practically desert.

In his book, "Springs of water and how to discover them with the divining rod," he quotes some 340 cases of successful locations, all of which are or were verifiable; but his successes must be numbered in thousands.

His latest case is probably that referred to in an article in *The Farmer and Stockbreeder* of November 24th, 1936, describing a bore made on his advice yielding 75,000 gallons per diem for a Dairy Farm belonging to Mr. E. Stewart, of Downham Market.

Tompkins was one of the original members of the Society, and on several occasions contributed to our Journal.

* * * * *

Attention is drawn to a letter on page 332 from Mr. Theodore Besterman. *The Divining-Rod* probably contains the best historical account of the subject in any language, and it is desirable that this new book should be as complete as possible.

* * * * *

The following errors occurred in the article entitled "Some Experiments on Fruit Trees," by Lieut.-Colonel A. B. Cunningham, which began on page 283 of the December Journal (*B.S.D.J.* II, 14).

Page 284, line 7 from bottom, "cause" should be "case."

Page 288, line 21, "sire" should be "scion."

Page 290, line 23, "1936" should be "1935."

* * * * *

The Editor would be glad to hear from anyone who wishes to dispose of old copies of the Journal, as all except No. 7, 12, 13 and 14 are out of print.

Lectures, printed below, were given by Major K. W. Merrylees, O.B.E., R.E., on December 2nd, on "Water Divining on the North-West Frontier," and by Mr. Francis Mapson, on January 20th, on "Experiments in Radiation Diagnosis and Healing."

* * * * *

Angle rods with a swivel handle can be obtained from Messrs. Windley Bros., Crown Works, Chelmsford, for 6s. 6d. post free to any address in England.

* * * * *

Messrs. Devine and Co., St. Stephen's Road, Old Ford, London, E.3, supply pendulums of whale ivory, with central suspension and cavity for sample, at the price of 6s., and other dowsing instruments.

They also supply whalebone for rods, cut to size.

* * * * *

Pendulums of rosewood can be obtained from the Hon. Secretary at 3s. each.

* * * * *

Communications for the Editor, and inquiries, should be sent to Colonel A. H. Bell, York House, Portugal Street, London, W.C.2.

WATER DIVINING

ON THE NORTH-WEST FRONTIER

(A LECTURE DELIVERED BY MAJOR K W. MERRYLEES, O.B.E., R.E., TO THE BRITISH SOCIETY OF DOWSERS ON DECEMBER 2ND, 1936)

I cannot remember the first occasion on which I found that I had the gift, but on several occasions in the last ten years in India I have tried when official dowsers were working, and obtained indications, but did not consider that mine were sufficiently strong to be of any use.

In 1935 I was transferred to the Khyber Pass as Garrison Engineer, and soon realised that the water supply there, though adequate in quantity, was not satisfactory, as nearly all the daily requirements had to be pumped about 9 miles and against a head of over 1,100 feet.

There was at that time stationed at Shagai Fort, one, Major Falcon, of the 5th Mahrattas, who had had considerable experience at dowsing and some useful results at Agra and elsewhere. I enlisted his aid, and from then onwards we spent some week-ends and all the spare time we could make chasing the underground systems, of which there were many, in spite of the extremely arid appearance of the hills.

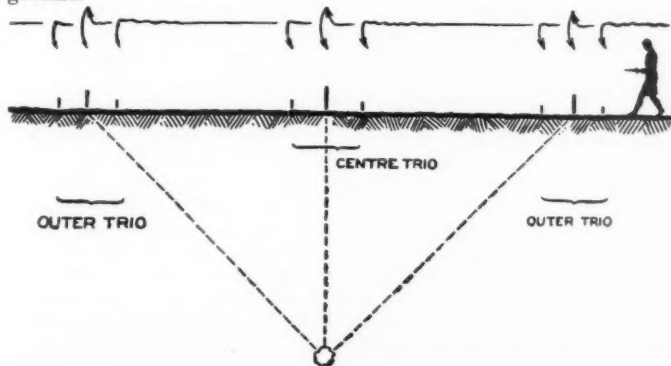
Before I talk about the country and the practical work, I will describe shortly the methods used by us up to the time I left India.

You must remember that the whole of the area consists of limestone and shale hills, often precipitous and much cut by deep valleys filled with boulders, the only exception being the plain on which Landi Kotal stands, and the upper valley of the Pass itself. These areas produced their own problems, which I shall refer to later.

Now to my methods. Both Major Falcon and I worked with natural twigs of any springy wood, willow being the most easily obtainable in this area, and often when natural "V's" were not to be found two straight pieces were cut and tied together with string. Springy wire and, later, whalebone were favoured because of the constancy of springiness, a natural twig becoming too dry and breaking after about three days at over 100° in the shade. Also, in spite of my efforts to prevent the tribesmen from looking on the whole thing as magic, spare twigs had a most curious way of disappearing when being examined and tried out by all and sundry.

Major Falcon is a dowser whose indication is an upward lift of the twig; in fact, he gets exactly the reverse of my movements, which I shall describe now.

I hold my twig in the normal way; horizontal and at waist level. When I get near to a stream or an area holding water below it the twig becomes live. I mean by this that there is no longer the drag of the twig's weight, though it does not actually lift. The next indication is a straight pull down, when I at once stop and take a new grip with the twig, again horizontal. Within a pace or two, the twig still being "live," it will lift to about 45°, and then turn until vertically downwards. This is usually quite a sharp movement. Taking another grip, a yard or two further on there is again a sharp single downward pull. These three indications I have named a "trio," and I have always found three such trios connected with every flow of water below ground.



So far I do not know if this first trio is that belonging to the stream itself, or if it is one of the two symmetrical outer trios, which are connected with the depth of the stream. Also I do not know at what angle I am approaching the stream. I therefore return to the centre indication of the trio, and standing on this I slowly rotate with the twig held normally. When facing in two opposite directions the twig will drop. This is the general direction of the flow of the stream at this point, and it is possible to walk away at right angles to this directional line and so find the shortest way to the next "trio." Still I do not know which "trio" belongs to the stream itself, and one of two tests are now applied. Again standing in the centre of the trio, and facing in either of the found directions I hold the twig with my hands close to the ground. If the twig lifts or drops it is the stream itself, and the direction of flow is from the direction in which I am facing when the twig lifts. Similarly, and this is a better test, if I walk along the indicated direction of the stream and the twig lifts or drops, then it is truly the stream. The outer trios produce no indication with this test.

I do not feel I am yet in a position to say exactly what is the connection between the outer trios and the central stream trio. It is undoubtedly closely related to the depth of the stream, and the trios are usually symmetrical. A theory is that the outer trios are the depth of the stream from the middle stream, but this does not appear wholly consistent, and although I always find the depth by this method I think it advisable to add a considerable factor of safety.

You can imagine that while the application of the above method is easy on a flat field it can be neither simple nor easy among precipitous Khyber hills. There was always another important factor in this area. Although I was privileged as Garrison Engineer and had the friendship and interest of the local maliks, there were areas into which it was inadvisable and often forbidden to go, particularly near the Afghan border.

Fortunately, the areas in which water could be usefully developed for Khyber needs were mainly accessible, though off the road. There were many so-called springs, varying from a patch in a nullah bed, wet at certain times of the year, to some large springs producing about five to seven hundred thousand gallons every 24 hours, but these were situated about 1,500 feet below the Pass and near the Afghan border. One area appeared really hopeful. A side nullah to the south had had a good flow of not less than three hundred thousand gallons per diem in it up to 1920. Then, when preparations had been made to use this fully, as it was only about 300 feet below the camp, an earthquake produced a fall of rock and the flow almost ceased, only about 40,000 gallons per diem being thereafter available.

As I very often found in the limestone hills, this flow was only a leak through faults, and the streams flowed often at right angles to the nullah beds and emerged sometimes many miles away in the Kabul river valley, if they could be traced at all.

Two distinct stream systems from widely spaced collecting areas were found within 100 yards horizontally and within 20 feet vertically in this valley. Efforts were made to dig down to two streams on one system, but after a few feet in the very solid limestone, which had to be blasted with gelignite all the way, faults were struck and water flowed in such quantities that with the pumps available work could not go on. The second system was attempted by a hole in a shelf of rock, clear of the nullah bed. Unfortunately, at about 25 feet, a fault filled with clay was found, which washed out and started a leak from a stream of the first system, making work extremely slow and making each day's work start with the pumping out of thousands of gallons of water, and then continual pumping through the day, so that the charge holes could be drilled. I regret that I have not heard if my successor has found either the time or the funds to continue this experiment. I have no doubt of the result if the job were completed, and the three wells sunk to stream level, but the engineering difficulties and the danger from storm spates are considerable in this very inaccessible spot.

My only other real attempt at well sinking in this area I fear must be classed as a failure, and, had I then known the attitude of dowsers towards clay beds, I think I should not have made the attempt. Water, as you can imagine, is nearly always expensive on the Frontier, and my failure was an attempt to obtain a supply in the camp itself, for use in a swimming bath and for gardens. The camp is on an alluvial valley-filling of a clayey earth called "put." A careful survey by several dowsers led to a well being started on the intersection of two streams and the depth from the outer indications was about 110 feet.

At 130 feet we had trouble with a small leak from a stream about three yards away from the shaft, but the well had been stopped at about 150 feet when I left, without the main streams having been struck, although the strong indication was still there at the bottom of the well, as it had been the whole way down.

My other dowsing in the Khyber area was limited to advice on well sites or improvements to existing wells, but it is undoubtedly an area in which development will take place. The almost complete deforestation, even down to bushes, has meant a continually decreasing supply from springs and wells, and a steadily rising tribal population, whose domestic supply is pumped by the Military, means continually increasing demands.

One other dowsing job I did was to try almost all visitors to the Brigade Mess in Landi Kotal over a small stream below the Fort lawn. I did not keep a record, but about 50 per cent. could feel a pull on their own, and about three were really good straight away. My method of testing is this: The pupil holds one end of the twig in one hand firmly and correctly. I hold the pupil's other hand and with my disengaged outside hand I touch the other end of the twig. I have only met one case where the pupil was able to prevent the drop of the end of the twig when crossing the stream. I can usually tell by the strength of the reaction whether the pupil will get a pull alone.

In September last year an expedition had to be sent against the Upper Mohmands. This is an area which can only be visited if you have a force with you, so there were only the records of 1897, 1908 and 1919 to go on, and on these occasions the force had used local water supplies in their undeveloped state. It is significant that in 1908, when the force entered the country in the spring, there were many nullahs with water flowing in them, while the autumn expeditions had lived on the village ponds. Boiling and chlorination will not remove the full flavour of these stagnant collections of rain water, and as a modern Brigade will require at least 20,000 gallons per day, the level of even the largest tanks falls quickly.

The base camp of the four-Brigade force was sited, as in 1933, at the highest point on the Gundab nullah, where there was a constant flow of water. This nullah at this point was a steep walled cutting in sandstone, and the springs were rivulets of water appearing through the gravel and boulders of the nullah bed. These rivulets when collected produced about 2,000 gallons per hour. Some other springs also in the nullah bed, which had been adequate in 1933, soon dried up, reflecting the lack of rain earlier in the year. A source used by forward troops in '33 consisted of shallow wells in a wide gravel nullah-filling, but I am of opinion that it was only a standing pool and of not very great capacity. As it would have been most difficult to protect a water point there it was never used.

To return to the camp and force supply. As the plant could not be run at night because of sniping, it would be necessary to procure at least 8,000 gallons an hour. Here is where dowsing came in. Instead of trenching deeply all over the nullah bed filling I was able to locate at once enough suitable sources, that is, leaks from the underground streams below the sandstone floor of the nullah, and with the minimum of digging obtain sufficient for the whole force for the two months. The main streams were never reached, it being sufficient to lessen the head limiting the flow from faults, but a much greater and more

reliable supply could, of course, have been obtained by drilling holes down to the streams.

This one source became and remained the chief supply for the force. I searched every nullah and hillside in the forward areas where I could find signs of springs having existed, but although on several occasions we blasted through solid rock for nearly 20 feet the only trace we found was once or twice a cavity with a trickle of water and wet gravel. These must have been the natural pipes for the flowing springs of the early part of each year. The open valleys were most disappointing. The only existing wells were of small output, and none less than 100 yards deep. Eventually the most forward Brigade was given its 20,000 gallons a day through a pipe line nearly 14,000 yards long, and with a total head over the pass of over 1,100 feet. Other dowers visited the area, but gave little encouragement. A peaceful survey of the area might produce some workable source, but except for the initial saving of time and trouble at the base camp, dowsing did not, I am afraid, produce any really startling results.

The third area which I attempted to investigate was Waziristan. I was presented with an unexpected one month's leave, in place of three I lost the year before, with the proviso that I should return to duty at the end of the month before proceeding home. At the request of the Minister for Agriculture, N.W.F.P., Colonel Noel, and accompanied by him, I spent nearly the whole month touring.

June is *not* the month to water-divine in that area, but I found that I could pick up the indications while riding on a country pony, though I then had to dismount to do the detailed exploration. Many of the places visited had already signs of water, and again these so-called springs could be shown to be only leaks from passing underground streams. In many cases I only had to locate the line of the stream, see that it was not too deep, and mark the most suitable place for the well and karez, or tunnel by which the water, at the least hydraulic slope, could be brought to the surface lower down the surface slope.

Often I was asked to find water in an area where the village women had to go upwards of four miles to get their domestic supply, and it was really surprising to find the number of streams, often verging on the uneconomically deep, which were below these scorched hills and valleys. In one or two cases where there were small damp patches from which a gallon or two could be collected in an hour, the tribesmen were too afraid of losing even this little supply to go wholeheartedly for the underlying stream. On the whole they were interested and believing, and I made a point of always showing one or two how the twig worked by my hand-holding test. A few could get a slight pull on their

own, but I never discovered any tribesman who was naturally a sensitive dowser.

I consider I was fortunate among dowsers in that my job, and the help of some of the N.W.F.P. officials in Waziristan enabled my locations to be tried out quickly. I have not yet heard how many attempted developments have been made, but I have heard of more successes than failures. Failures usually will, I think, be through errors in estimates of depth, or the deceptive small trickle in a hole which has been made by and may occasionally carry a large flow.

One failure may offset a dozen successes, and there is always the sceptic who, seeing a success, asks, "What proof have you that anywhere else in this area would not have been equally good?"

A month in an area of 10,000 square miles like Waziristan only touches on the fringe of the problem. Water is beyond price on occasions, and valuable always. A dowser might map the useful streams in a couple of years' hard work. In the small patches in which I gave the meagre total of 39 locations I can only hope for enough successes to enlist the interest and approval of the tribesmen so that they will clamour for more. The political officers will be really responsible for this result because they spared no trouble to ensure success of what I know some of them thought to be a *most* peculiar business.

The Frontier Province, suffering more and more from the evil effects of deforestation, will have to develop its underground sources to compensate, and apart from anything else, an assured water supply, even if it is only enough for domestic purposes, is a pacifying factor of considerable importance.

Elsewhere in India there are water problems of no less importance. The Punjab, partially due to over-irrigation, is suffering from sour areas, and areas in which the well water is too salt even for irrigation.

Many new wells recently sunk, and sometimes within a few hundred yards of a sweet well, have had to be abandoned. The location and mapping of these sweet and salt areas would save many thousands of rupees annually to government and the landowners, and would enable the water table to be lowered by pumping from sweet areas back into the canals. No one but a dowser can help here, as even test bores are an expensive luxury.

FINDING A GOLD SIGNET RING BY DIVINING

By Major S. H. PAKENHAM-MAHON

The method used and the terms employed are the result of some six years' research, and may not be clear to all diviners.

The terms are my own designation, as I do not know of any other names to describe the characteristics of the type of radiation.

Early last June (1936) Lord Farnham wrote to me to say that his son, the Hon. Somerset Maxwell, had lost a gold signet ring by its dropping through a hole in his trouser pocket whilst he was clearing shrubs on the shore of Lough Sheelin.

Lord Farnham had seen me find a gold ring before, which had been hidden in his garden, and he asked me if I could come and discover the ring that was now lost. At the time I heard from Lord Farnham I was in a nursing home with a poisoned hand. I was not, therefore, able to go to Lough Sheelin until some three weeks after I had received his letter.

The ring, a gold signet ring with an agate set in it, was supposed to have been dropped on a part of the bank of Lough Sheelin, about 200 yards long by fifty wide. The ground was covered with coarse tussocky grass about eighteen inches to two feet high and dotted with low shrubs, mostly rhododendrons. The Hon. Somerset Maxwell had been clearing some of these shrubs in various places within the defined area, and before commencing work had placed his gold signet ring in his trouser pocket. On returning to his room in the evening he had discovered that the ring was missing and he had a hole in his pocket. A search was made with no result, the nature of the ground making it almost hopeless.

I had never been to Lough Sheelin before. I was taken there some three weeks later by Lord Farnham to find the ring. The other persons present were Lady Farnham, Miss M. Lomer, the butler from Farnham and two English visitors to Ireland, who appeared in a car after I had started work and were present when the ring was recovered.

I used a fifteen-inch divining rod, each arm $\frac{1}{4}$ in. diameter, colour black, made of whalebone, and fitted with a special selector for gold made by myself.

On arriving at the site I observed that on the south of the probable area in which the ring was lost was a path running east and west. I therefore took a line straight up the path, considering that if I passed within thirty yards or so of the ring I should pass over its M. Characteristic Direction. This I did do. Some seventy yards up the path, on locating the line, I turned north up it, and after going some ten yards I crossed the 45° circle formed by the ring; the grass was very long and thick here, so I plotted the 45° circle. Having done this I passed straight above the ring and, on putting my hand into the grass, found it lying among the grass roots. The whole recovery took about ten minutes.

"EARTH RAY" PHOTOGRAPHIC TESTS RELATIVE TO AN UNDERGROUND STREAM

By J. CECIL MABY, B.Sc., A.R.C.S., F.R.A.S.

The following tests were made after the manner of von Pohl, Dobler and Beichl, whose claims regarding the existence and photographic demonstration of "earth rays"—said to be the same as those which cause the dowser's reactions—are well known.*

The greatest care was exercised in all the tests to protect the plates from any light or heat rays, from dampness, known radioactivity or damage to the sensitive films, due to fingering or scratching in setting up; though some rubbing was unavoidable.

In every instance, after the necessary pieces of polished metal strip had been bent across the sensitive surfaces of the plates, so as to lie as flatly in contact with the latter as possible without undue pressure or scratching, the plates were wrapped round with two thicknesses of yellow waxed photo paper, then screened on the *upper* (non-sensitive and backed) side with thin dull-black iron sheeting, and finally wrapped round and sealed up, light-tight, with two more thicknesses of black photo paper, numbered, and at once laid in position, face downwards. Each batch of prepared plates was laid on a waxed three-plywood board and covered from the light and air with a triple layer of thick black felt, so as to exclude—it was hoped—all stray radiations of an ordinary sort from above and from the sides.

The batches were, moreover, kept in darkened rooms, screened from draughts and dampness, at a fairly constant air temperature of between 50° and 55° F. There they remained *in situ* for 30 days, after which they were taken direct to the dark room (still covered) for development, in darkness, by time and temperature procedure; being given a full normal development of uniform duration, all in the same solution (metol-quinol Kodak "Special" developer). Finally they were fixed in plain hypo, and dried; the plates all being serially numbered at the commencement of the experiment.

The only exceptions to such treatment were the preliminary plates that were placed out of doors in a full summer sun and under a cold winter (overcast) sky, respectively; these were, however, similarly wrapped and screened, but were not kept in a cool dark room.

* *Erdstrahlen als Krankheitserreger*, by Baron von Pohl; an article by Colonel Karl Beichl on the Photographic Proof of Earth Rays in *Der Allgemeine Österreichische Chemiker-und Techniker-Zeitung* No. 21/22; *Experimentelle Untersuchungen über biologische Wirkungen der sogenannten Erdstrahlen*, by Dr. Ed. Jenny, Ing A. Ochler and Dr. H. Stauffer; *Physikalischer und photographischer Nachweis der Erdstrahlen*, by Dr. Paul E. Dobler.

Various types of plates and screening and metal contact strips were employed, as described below; but the preparation and wrappings were otherwise uniform for all. The metal contact strips were very carefully polished just before use with fresh emery cloth, were not fingered subsequently—except at the ends that were bent round the backs of the plates—and were kept for an hour on a cool, dry and electrically earthed metal plate before application to the photos.

The comparison plates were all taken from the same maker's packets, so as to ensure as much uniformity as possible, and the metal strips were all from the same plates of metal, filed and hammered smooth. Commercial (impure) metal samples were employed. The various screens between earth and photo plates were all of approximately equal thickness, namely, 5 mm., or about 1/5th inch.

The batches of test plates, on their wooden boards, were placed on an oolitic limestone flagged floor in the preliminary tests, and on a floor of blue bricks in the second place; lying directly upon undisturbed Oxford gravel and Cotswold limestone respectively, at (excavated) ground level. The underground streams were estimated at not more than about 15ft. below the floors; one of known moderate output and the other sensed with the rod to be about the same. The position of the first stream, at Oxford, had been quite independently located and checked by some twenty dowers, while that at Bourton-on-Hill, which issues from the hillside a hundred yards away as a good steady spring after feeding two wells, was likewise checked many times. The paths of both streams, which conveniently lie under my previous and present dark-room and laboratory, are also clearly indicated by damp patches rising in the walls of the overlying buildings. Needless to say, I avoid sitting and working just over the streams, as far as possible.

PRELIMINARY TESTS.

Several plates, metal screened above, and wrapped as already described, were first exposed to the supposed earth-rays in a dark basement room over the Oxford stream in 1935, during April. Polished aluminium strips and two types of plate were used, the exposure being for 30 days. The results were as follows, confirming the general observations of the continental investigators, and one of these negatives was exhibited at a meeting of the B.S.D. last year. (Vide my paper on *The Psychical Element in Dowsing*, in this Journal, II, 9).

Ilford Infra-red Plates.—Slight fogging of plates in flat contact with aluminium strips, with darker blotches along the cut edges of the latter, apparently corresponding to points and irregularities.

Ilford Pan-Process Plates.—Ditto above, but fogging rather fainter. No general fogging of plates in either instance, showing

that the aluminium was the active principle, especially where freshly cut and in good contact with the sensitive films.

In the second place (repeated at Bourton in autumn 1936), the same two brands of plate were similarly prepared and laid in the full light of the day sky on the top of a thick stone wall, but clear of the stream, and with the metal screening *below*; the sensitive film upwards to sky. As was anticipated, a little infra-red radiation got through the black papers and slightly fogged the infra-red plates, whereas there was no visible image after four hours in full sun or ten hours under winter sky, on the Pan-Process plates. In neither instance did the aluminium strips leave any appreciable image on the plates, except in so far as they had screened the infra-red plates from the heat rays, and so prevented fogging.

It was concluded from these tests in a bright and, in one case, intense sunlight, that any fogging that might be observed in contact with metals in a dark cool basement or dark room, where all such radiation was believed to be excluded, must inevitably be attributed to some other effect than that of photo-electric action of the metals under the influence of solar radiation. Even allowing for the fact that the exposures were very much longer in the dark tests, I am satisfied that we can altogether rule out photo-electric action due to visible or invisible light.

MAIN TESTS.

A.—Five Imperial Eclipse Ortho plates ("soft" and backed variety) were prepared as already described, with a strip of aluminium and of tinned iron in contact with each, and laid, face downwards, immediately over the middle of the stream at Bourton-on-Hill. They were left *in situ* from October 17th to November 17th, 1936. The aluminium strips were curved, so as to distinguish their impressions from those of the iron. Five different screens were used. Uniform development and careful examination against a white opal glass screen resulted in the following observations:—

1. That the aluminium strips produced local fogging of the plates where the two surfaces were closely adjacent—in loose contact, that is to say. The *whole* surface of the polished metal produced such an effect, not only the cut edges; the fogging being pretty uniform, and creating a clear, though faint, image of the aluminium strip on the sensitive side of each plate.
2. There was a very slight general fogging of the plate (not due to development), against which the tinned iron strips effected a local screening action, their positions showing up white against a faint grey ground.

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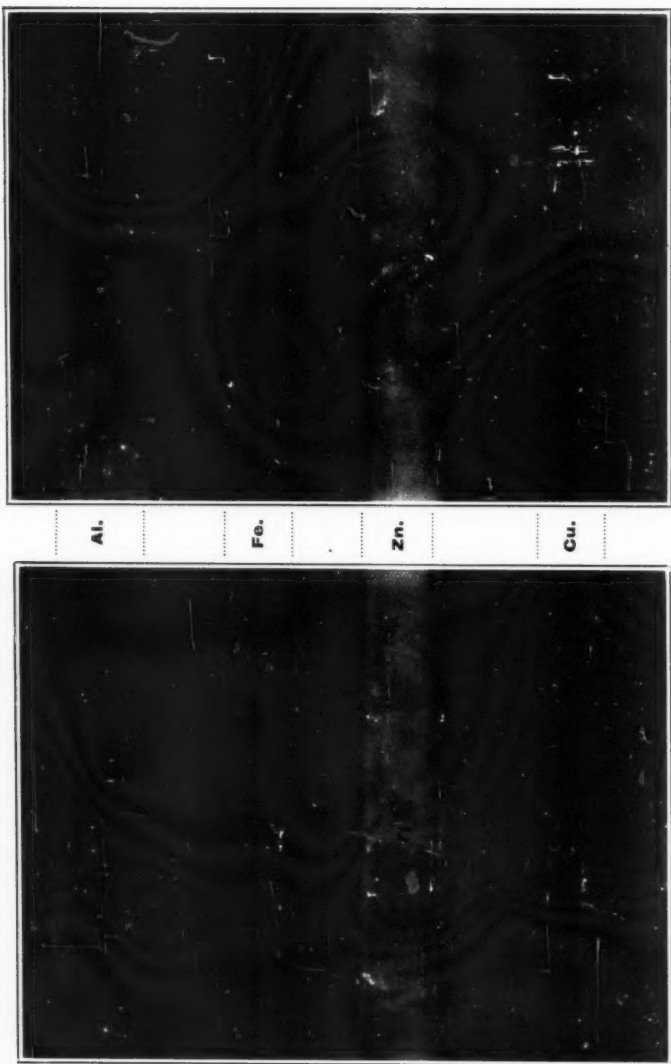


Fig. 1a.

Fig. 1b.

Photos showing the various effects on two Ilford "Process" plates of strips (from above downwards) of aluminum, tinned iron, zinc and copper, freshly polished, and laid in close contact with the sensitive films of the plates for a period of 30 days each: **fig. 1a**, directly over a shallow underground stream, **fig. 1b**, quite clear of stream, at same level, over "neutral" ground. Note that the iron and copper left no impressions, and that those from Al and Zn are about equal in density on the two plates—typical of other examples. Note bright contact points and accidental rubbing marks due to similar action of metals on photo film.

3. That the images were about equally dense on all five plates, the interposed screens of strawboard, glass, celluloid, iron and lead respectively having had no appreciable screening effect whatever.
4. Where the metal strips had tiny excrescences or points that had pressed against, and rubbed, the sensitive films, quite dark corresponding marks had developed in the silver salts, owing to electro-mechanical or electro-chemical action.
5. Where the curved aluminium strips had been bent round on the glazed backs of the plates, out of direct contact with the films, though only about 1 mm. distant from it, there were no corresponding images on the films. This fact showed that the rays or emanations from the aluminium must be of very short range in air and screened off by thin glass, or else that the action of the aluminium on the sensitive film was a direct-contact, electro-chemical one.
6. The plates and metal strips were still perfectly dry, and there was no reason to suppose that additional moisture, light, or impure gases had anything to do with the action between the aluminium and the silver emulsion; aluminium, as G. Le Bon showed many years ago in his pioneer work on photo-electric and infra-red phenomena, being a particularly active metal photo-electrically and electro-chemically.

B.—Another batch of six plates—three varieties, two of each kind—were similarly prepared, but this time with four different metal strips in contact with each one; namely, aluminium, tinned iron, zinc and copper. Also no subjacent screens were employed, only the *top* iron screening. [See figs. 1a and 1b.]

This batch was divided into two groups of three plates, each containing an infra-red plate, an ordinary "Process" plate (*i.e.*, a slow, fine-grained emulsion), and a hypersensitive panchromatic plate (having ultra-fast, coarse-grained emulsion).

One set of three plates was laid over the middle of the underground stream, the other set six feet away, and quite clear of the stream's influence, as judged by a divining rod. The whole lot was put down at the same time, and left for 30 days during October and November, 1936, as above.

Uniform development and examination against an opal screen gave the following results:—

1. Contact images of both aluminium and zinc strips appeared, the latter being appreciably stronger than the former; but no images in conjunction with the tinned iron or copper. These effects were approximately equal both

over the stream and clear of it, to the eye and as measured (for density of the silver deposit) with a photo-electric photometer.

2. Images only appeared on the Ilford "Process" plates (see last item), the infra-red and hypersensitive panchromatic plates showing only very slight general fogging, except where they were screened by the metal strips, under which the plates were quite clear. This is curious, as the "Process" plates were far less sensitive to electromagnetic rays from the gamma to infra-red regions of the spectrum (frequencies, say, 10^{12} to 10^{21} per sec.) than the other two types conjointly. In fact, one may say that the red and infra-red rays would not have been effective in the case of the "Process" plates, which should also have required much greater intensity of energy than the hypersensitive panchromatic plates, in respect of the actinic and ultra-violet rays—supposing either of those to have been operative. The obvious explanation, therefore, is different electro-chemical action on the various emulsions of the three brands of plate.

C.—A final batch of four Ilford "Process" plates with two strips of polished aluminium and two of zinc across each—one of each kind in direct contact with the plate, and one of each having very thin paraffin waxed paper in between the metal and the film—was now prepared. These were left for a month, wrapped and metal-screened above, as before; two directly over the stream, and the other two twenty feet (horizontally) clear of the stream and of any parallel reaction zones, as estimated by the swivel rod (Budgett's pattern); one plate *horizontal*, one *vertical* (see figs. 2a and 2b). A couple of similarly prepared plates, having the metal clips electrically earthed, were also placed over the middle of the underground stream.

1. There was no appreciable difference in the density of the resultant images of the strips on the vertically and horizontally placed plates, showing that the supposed radiation cannot have come only vertically, from the earth.
2. The density and nature of the images under the strips that were separated from the silver emulsion by thin waxed paper was only very slightly less than that of those in direct contact. Where the metal strips passed round to the backs of the glass plates, however, there were no corresponding images. It is concluded from the above facts and from the fact that the paper was found, after delicate tests, not to be quite a perfect insulator—especially

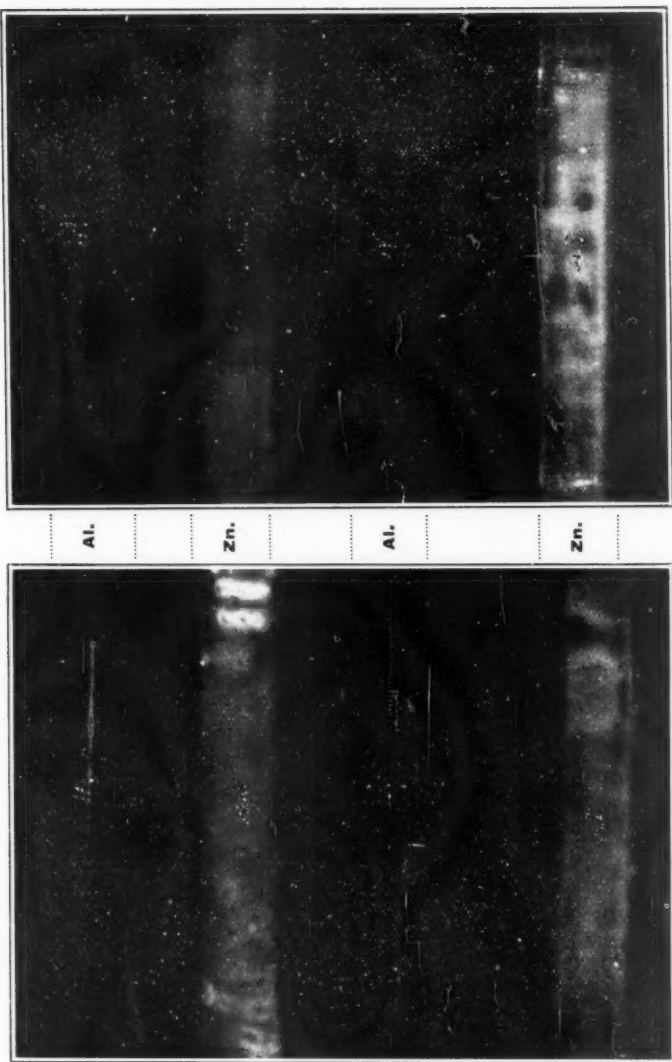


Fig. 2b.

Fig. 2a.

Explanation as for Figs. 1a and 1b, except that the metal strips used in this instance were aluminum, zinc, aluminum, zinc (reading from above downwards); the upper two strips, in both photos were partially insulated from the surface of the photo film by thin waxed paper of the yellow photographic variety, and both plates were over the stream; **2a** being vertical to the Earth, and **2b** horizontal. Exposure of 30 days in complete darkness. Note uneven density of images, owing to uneven contact, but **2a** and **2b** approx. equal. The Zn (straight) strips gave densest images. Unfortunately, the fainter Al images have been almost lost in reproduction.



Fig. 3a.

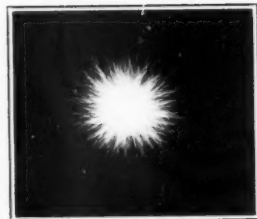


Fig. 3b.

Fig. 3a. Contact impressions of silver coins made, without a camera, by direct electronic and or invisible ultra violet rays on sensitive silver bromide emulsion, on glass plate.

Fig. 3b. Image on silver bromide film produced by high voltage electrons streaming away from a point of contact with the film, and creating mutually repellent "lines of force."

to high potential electrons—that *high velocity electrons, or else similar rays*, incapable of penetrating a perfect insulator such as dry glass, must be responsible for the reaction.

3. There were images of normal density on the earthed plate, with extra dense points where irregularities on the metal strips had pressed against the photo film. It is concluded from these facts that the reaction was an electro-chemical one between the silver film and the metal strips, and that the lead plate joining the strips helped to complete the circuit of a miniature electric battery, or "Voltaic pile." A denser image would naturally result, under such circumstances, at the main contact points between the plate and the strips, which would act as prime collectors and distributors of electrons in the supposed voltaic pile circuit. Electro-chemical action between the emulsion and the metals would also tend to be strongest at such points, resulting in a modification of the latent state of the emulsion, similar to that due to the release of photo-electrons by light, which would subsequently show up by reduction of the silver salt on development.

A photographic plate with gelatine film and silver emulsion is a sufficiently good conductor of electricity, especially in damp air, to enable a slow flow of electrons and the necessary local electro-chemical reaction, postulated above, to take place, and thus build up a faint image after 30 days or so.

It is also important to note that certain metals gave much stronger reactions than others; depending upon their relative electro-negativity or positivity to a silver emulsion. Similar effects have long since been noted when certain substances are placed for some while in contact with photo plates; imprints of the detailed structure of woods, &c., can be thus obtained. These were, at first, erroneously attributed to some unknown biogenetic radiations; but were afterwards found to be attributable to electro-chemical and radioactive influence of an ordinary and understandable sort.

CONCLUSIONS.

It can, I believe, be safely concluded from the foregoing critical experimental tests that the continental workers are entirely mistaken in attributing the images, obtained when strips of metal, such as aluminium and zinc, are left for some while in contact with sensitive silver (photographic) emulsions, to the action of any extraneous source of radiation. The tests made in this laboratory clearly indicate:—

- (a) That the images in question are equally strong (other things being equal) either directly over an underground stream or in an equivalent position clear of any stream, over "neutral" ground, as estimated by the divining rod.
- (b) That the images are equally strong whether the plates are unscreened (except for black paper) or else metal screened above, and screened below with various metals or non-metals.
- (c) That the images are equally strong whether the plates be exposed horizontally or vertically with regard to the Earth's surface, and whether they are laid directly on the ground or else on the third floor of a high house.
- (d) That the influence of the metal strips on the photo emulsion is electro-chemical—being most strongly given by metals that are electro-chemically most different from silver—in the sense of the use of various metals in voltaic piles, thermo-couples, rectifiers, &c.; and the reaction only occurs when the said metals are in direct electrical contact with the sensitive film, or else indirectly contacting it through some thin and imperfect electric insulator. Perfect insulators (*e.g.*, dry glass) would appear to prevent the reaction; and the images were densest wherever the metal strips pressed most heavily against the film. Light scratches on the film by certain metals were also found to give rise to developable images, that were judged to arise by similar electro-chemical action of shorter duration, but greater intensity.

Careful cleaning and polishing of the metal strips, also freshly cut and jagged edges, give rise to stronger images than tarnished, or smooth and uncut, strips of the same metals.

- (e) Several hours' exposure of similarly prepared plates, suitably screened from visible light, resulted in no such images being formed by the action of the sun's infra-red rays on the metal strips, indicating that such radiation, or the temperature effects that it produced, were not responsible for the reaction in question. It is already known, however, from the work of G. Le Bon and other early investigators, that, under the influence of ultra-violet and X-rays—not here in question—metals in contact with photo plates will create images of the sort under discussion after only a few minutes of irradiation. He also observed that zinc and aluminium were especially "radio-active" in that respect, copper and iron less so, as I found in the present investigation. Photo-electric action was here impossible, however.

APPENDIX.

The following quotations will be found to provide a fitting corroboration of the foregoing deductions; the majority of observations cited having been made by expert physicists in the nineteenth century.

In his well-known work, *The Evolution of Forces* (Paul Trench, Trübner and Co., 1908), Gustave Le Bon writes of the photo-electric activity of various metals, especially zinc, aluminium and platinum. He found that, after a few hours' exposure to direct sunlight—causing photo-electric and strong heating effects—plates of such metals in contact with a photo film gave rise to fogging of the latter. He remarks that “at the end of a few days the metal no longer gave any image,” and attributes the effects to “radio-activity of the metal, and this is the reason that they can be increased by slight heat.” He concludes by saying: “It is not metals alone . . . which may give such impressions, but wood and animal tissues also produce them. They are made more active by slight heat; but it is evident that with these different substances certain chemical reactions may also come into play.” It does not seem to have occurred to Le Bon that fresh emery-papering of the metal test plates might have rendered them reactive again—as he himself observed, in fact, in another connection, and as is now so well known in connection with photo-electricity.

With regard to such reactions on photo plates, he does, however, say: “The causes of these (reactions) being determined, these experiments no longer present any great interest.”

Le Bon also gives photographs of the effects of various metals on sensitive silver bromide plates, and tells how a clean silver coin (especially if rubbed over with mercury), first placed in a full summer's sun for some while, and then quickly transferred on to a photo plate, in the dark, will record its engraving on the plate. Another attractive experiment of the same sort, showing the action of high-voltage electrons on a silver bromide emulsion is illustrated by fig. 3a. The silver coins that produced these images were simply laid in contact with a photo plate and then connected to one pole of a source of high-voltage electricity (no actual sparking observed), while a metal plate was placed beneath the photo plate, and connected to the other pole of the supply. Electron streaming and attraction and repulsion patterns can also be photographed in such a manner by means of the invisible discharge from an H.T. electric supply (fig. 3b). It is a question, however, whether some, at least, of such impressions are not due to the ultra-violet rays emitted from sources of brush discharge.

Elaborate artificial equilibrium figures, often resembling patterns created by biogenetic forces, can thus be produced, as

G. Le Bon has shown. (*Loc. cit.*). Similar patterns, resembling radiations and emanations of this sort can also be produced by osmotic and diffusion currents in liquids (Leduc); and Bertholet has recorded photographic impressions of a similar kind, which he claims to represent rays from the human hand and finger tips; but the writer has conclusively proved such effects to be due to diffusion currents in the photographic developer, originating with the warmth of the hand or any other inorganic (warm) object similarly applied, plus very slight fogging of the film.

Le Bon also found that invisible phosphorescence of certain sulphides, &c. would give contact prints on photographic plates. The images at present under discussion would appear to fall into line with these other various electro-chemical and photo-electric effects.

In his standard text book, *Electricity and Magnetism*, arts. 80-82, Professor Silvanus Thompson remarks: "Volta showed that the contact of dissimilar metals in air produced opposite kinds of electrification, one becoming positively, and the other negatively, electrified. . . . The real truth is that the electricity of contact and the chemical action are both due to transfers of electrons between the substances under the action of forces about which very little is known with certainty." (Electro-chemical affinity). "Volta found, moreover, that the differences of electrical potential between different pairs of metals were not all equal. . . . He was able to arrange the metals in a series such that each one enumerated became positively electrified when placed in contact in air with the one below it in the series." These relative differences were subsequently measured by Ayrton and Perry, and the order of the contact series was found to be almost identical with the relative electro-chemical powers of the same metals. The whole process appears to be bound up with the oxidation of the substances in the presence of moist air.

Films of condensed gases on the surfaces of metals will show similar electric cell effects, and even two such non-conductors as sealing-wax and glass, placed in close contact, will show similar potential differences.

I feel justified in repeating the warning here, in view of the foregoing considerations, that those who do not happen to have had a training in physical and biological science should be rather more chary than they so often are of jumping to conclusions regarding radiations and radiesth sia on the slender basis of seeming facts, which may happen to be susceptible of very different interpretations from those given by the casual observer.

THE ROD OF MOSES

By Lt.-Colonel H. M. EDWARDS

The account of the provision of water in Numbers xx states that there was abundance for the people and their cattle. In Numbers xxvi the census return gives a total of approximately 625,000. This figure, queried by critics, is confirmed by Joshua iv, 13, which gives his striking force as 40,000, after, of course, allowing for the defence of the permanent camp at Gilgal, and of the feeding herds. This proportion tallies closely with the $4\frac{1}{2}$ millions which the German nation of 70 millions were able to put into the field in the Great War.

The very large quantity required for such numbers could hardly have been produced by water percolating through porous rocks and held up by a thin impervious skin. The explanation given in the December journal is therefore not very satisfactory, though it is certainly better than the theory that Moses (who according to the Bible was nearly 120, and who could not have been less than 80) spent the little spare time which his heavy responsibilities allowed, in prospecting the wilderness for water, in order to bring off a dramatic coup.

We may fall back on the belief that the event was a miracle in the sense that the Israelites believed it to be, but there are a few pertinent facts to be considered. In the first place the Israelites never went near what we now know as the desert of Sinai, which then, as now, was impossible for nomads. They wandered in the wilderness, much less desiccated then, between the southern frontier of Palestine and the Gulf of Akaba, and they found Amalek, the nomad tribes of Bedouin, already in occupation. The miracle occurred twice; once at the beginning of the 40 years, as related in Exodus xvii, and again at the end, as quoted above. On both occasions the water was called Meribah; in the first it was near Mt. Horeb, in the second near Mt. Hor. Between the two, all the adults who witnessed the first, except Moses, Aaron, Joshua and Caleb, had died. On the first occasion Amalek attacked Israel, and it is reasonable to suppose they did so because Israel was sitting on their water supply. It is also to the point to recall that Moses spent at least part of the time of his exile from Egypt in this region, and that it was at Mt. Horeb that he received his call to leadership.

No one but a fool, which Moses was not, would lead a nation into the desert on the chance that water might turn up. On the other hand, the greatest leader, responsible for conducting a self-willed people through great hardships and dependent entirely on moral ascendancy, might find occasional need for dramatic assertion.

I think we may assume that Moses knew beforehand of both sources (if they were not identical), and that he sent ahead a

confidential party to cap them. He may have used the rod to break the capping, but it is more probable that he used it as the overseer's rod was used in Egypt, to indicate to the working party where and how to work.

An interesting discussion of the Exodus is contained in *From the Garden of Eden to the Crossing of the Jordan*, by Sir W. Willcocks, published at 3/6, by E. and F. Spon.

A WATER DIVINING EPISODE IN AUSTRALIA

By E. M. BARRITT-SANDLAND

Byro Plain, in the Murchison, several hundred miles north of Perth in Western Australia, is a large basin some two hundred miles long by eighty miles wide, surrounded by break-away hills. It is covered with good herbage but waterless.

This plain is one of the finest places for fossils in Australia, and the extraordinary mirage effects are the queerest I have seen. I was confronted by four beams rising several hundred feet from the ground to a large oblong body, from which rose four more beams to the heavens. It was not until I was within a hundred yards of this object that I discovered it to be a very ordinary little donkey!

In hopes of finding water a bore was put down in a likely place to a depth of 3,000 feet, 1,500 feet of which was through a coal-like substance known to us as "black jack," as hard as iron and very shattering to the drills, making the job long and very expensive. When water was found and sheep put on it, sheep being able to live longer on brackish water than cattle or horses, they did very well for about three months, and then had to be changed to a new paddock and fresh water, as they were rapidly falling away. The corrosion from this water ate through reinforced concrete tanks and troughs very quickly, so the whole scheme was completely hopeless and a big loss.

Mr. D'Arcy, the general manager of Byro station, thought he would try a divining rod. The result was negative or brackish on the plain, so he worked towards the hills, and was soon rewarded with a strong pull on the rod right at the foot of the hills and also along the tops. I saw the second bore, which was on the flat top of the hill. This supplied many thousands of gallons of excellent water daily from a depth of between three and four hundred feet. No "black jack" was encountered in the boring. There are now four similar bores fully equipped, and the plain carries several thousand sheep, cattle and horses all the year round.

The usual rod for divining is a forked stick cut from wattle or manna gum, although some diviners prefer wire.

EXPERIMENTS IN RADIATION DIAGNOSIS AND HEALING

(A LECTURE DELIVERED BY FRANCIS MAPSON TO THE
BRITISH SOCIETY OF DOWSERS ON JANUARY 20TH, 1937).

MR. PRESIDENT, LADIES AND GENTLEMEN,

I am aware that my subject is a highly controversial one, but so also are all branches of the Dowser's art, but unless we have the courage of our convictions we may be tempted to avoid such controversy, and in doing so much useful data would be lost.

I purpose, therefore, to tell you of my experiences in Medical Radiesthésie, without asking you necessarily to accept them as conclusive evidence, if only for the reason that each and every Dowser's reactions vary considerably.

My first connection with this form of Diagnosis and with Natural Healing was made at a very early age, my father having been a very successful practitioner, specialising in Rheumatic affections, and his cures and his methods were an everyday part of my young days. Many of the new theories of to-day were matters of tradition in his family; therefore I think that we are rather re-discovering old knowledge, lost in the rapid civilisation of man, then something new. We at least know that such methods of healing have been used from the earliest days of mankind, and the ancients were not *always* wrong. We no longer believe in the Gift of Healing, which is strange when you come to consider that we do believe that success in almost every other human endeavour demands a gift or vocation. The Poet, the Priest, the Musician, the Artist, the Orator, all are considered gifted; surely the Dowser is gifted too, and that not only to the finding of water.

In the remoter parts of the West Country the simple folk do still class the Dowser and the Healer as one, and many country Dowsers have an excellent reputation as such.

Even in these days of Science, Dowsing makes certain claims which are well founded and worthy of greater investigation. Radiation Diagnosis is convenient, rapid, and, at least in certain diseases, extremely accurate. It facilitates a choice of remedies, and the effect of the remedy can be rapidly and accurately noted. It is of great value in preventive medicine, indicating harmful and beneficial foods, soils, and colours. By its use also vitality may be measured and studied. Without its use many of these important things have to be guessed at, and statistics show that the first guess, at least, is usually wrong. The increased use and study of Dowsing would do much to eliminate such guesswork.

I believe that all life can be expressed in terms of rhythm and harmony. The Dowser is susceptible to the vibrations which

are the tangible effects of that rhythm, and can therefore locate the presence of that disharmony which is disease, or the cause of disease.

The first and easiest phenomena which can be studied is that of food. By the aid of the pendulum harmful or beneficial substances are quickly classified. You are probably well aware of the method, but I will repeat it for the benefit of anyone who has not yet had experience of it.

Place your sample of food upon a neutral ground, say a plain wooden table, not in or near metal. Adjust the pendulum over the left hand until you obtain a strong positive or clockwise swing. Now still the motion by touching the pendulum upon the table, and then hold over your sample. The reaction will be either positive, negative (or anti-clockwise), or neutral, reading good, bad, or useless. You may, of course, make this experiment vice versa, starting with a reaction over the sample and carrying it to your hand. Needless to say, in this, as in all diagnosis, it is essential effectively to rule out any preconceived ideas which may give rise to sub-conscious effort upon your part.

Now for the methods by which a general examination may be made. Surrounding, and emanating from, the body, are continuous lines of force which are alternately negative and positive. In perfect health these lines are well defined, continuing for a space of 15 inches in the average person, and ending sharply; but with this peculiarity, that the positive line bends back to meet the slightly shorter negative line. The two do not, however, touch. Where vitality is low the lines are proportionately shorter, less well defined, and, instead of ending sharply, diminish gradually. There is no longer any sign of the positive line being incurred to the negative. In cases where serious illness is present these lines may be practically or totally absent, but will be replaced by negative lines of force over the seat of the disease.

You will appreciate that diagnosis on these lines demands most careful and accurate observation, and considerable practice, and the adjustment of the pendulum must be most exact. I say the pendulum because it is my experience that while the rod, especially if it be very sensitive, such as a fine whalebone, will show these lines of force, it will not do so with the same fine definition as may be obtained by the pendulum. Your pendulum must be light, not more than two ounces, and if even lighter it will be better. Messrs. Devine have recently sent me samples of both rods and pendulums suitable for the purpose, and the two here demonstrated I find excellent. (These are the lightest, round section whalebone rod, and the smallest size ivory round, cavity pendulum).

In making this and all other examinations it is highly advisable that the subject be dressed in one simple garment, preferably black, and that your surroundings be as neutral as possible.

Colour plays a great part in both health and disease, and certain colours give definite reactions similar to certain diseases, or will temporarily increase the strength of the lines of force; as will also the subjects mental state. In the latter connection I was, at one time, often led into some degree of error by an excitable subject, whose intense mental activity was conveyed to the lines of force, showing a degree of vitality which was only temporary. I experimented with several such subjects under hypnosis, and satisfied myself upon this point, for under hypnosis the normal lines became accentuated and false when suitable suggestions were given. But I was not able to obtain an obverse effect, that is, I was unable to diminish, by suggestion, the normal lines of force of a healthy person. And here I will digress a little to remark that this phenomenon of the alteration of the lines of force by suggestion seems to me to open up a new and valuable field for research, whereby much assistance may be given both to the cause of Dowsing generally and to medicine, or, more especially, psychology, in particular.

Now I will come to more particular diagnosis: for the seat of disease, or its cause. And here I tread on difficult ground, since I am aware that my own standards and reactions may, and do, vary from some other dowsers. Therefore I would ask you not to accept too closely my own reactions, but rather, if you will, use them as a starting point upon which to base your own individual calculations.

We will presume you have made your general examination and found an indication of ill-health. Now proceed to examine your subject, not with the pendulum directly, but with the first or second finger of the left hand outstretched and about five inches from the skin. The pendulum is held in the right hand, the arm being slightly extended at a comfortable angle, so that the position may be maintained without strain. Where a reaction occurs note the spot, but continue your examination over the whole body lest you make the error of mistaking a subsidiary lesion for the primary cause. Having located the position, you may measure its depth by comparative measurement taken from in front and from behind, which, if done with great care and precision, will indicate which organ is affected. I have found only one variant from this rule, and that a most interesting one. In the case of neurasthenics who have complained of pain in some definite position I have been unable to obtain any reaction in that spot, thus proving not only the pain to be imaginary, but, what is more important, that one's subconscious plays no part in obtaining a reaction.

The selection of a remedy, or remedies, is the next step. This is effected by a process of trial and error, each possible remedy being taken as a sample until a strong, definite, positive reaction occurs. Where, as occasionally happens, more than one substance

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is indicated in this manner, it becomes necessary to make a fine analysis of the proportionate amounts of each. This may be done by noting exactly at what distances each reaction is obtained, the greater distance being that of the greater quantity needed. The medicinal dose is then divided by the proportionate distances or percentages. The effect of the remedy may be subsequently noted, day by day, by the effect upon the general lines of force and by the diminution of the morbid reactions.

In the case of malignant growths there would appear to be certain indications not usually present in other diseases. The lines of force are almost, if not totally, absent, and the growth itself sends out a number of extremely forceful lines, well defined and extended for a considerable distance, at least in advanced cases. Further I find a colour affinity always present, and that always yellow or combinations of yellow. This same colour reaction I obtain over injurious soils, and invariably find that the two, I mean the growth and the injurious soil, are associated. Such variations as I have found have been in the cases of persons who have changed their residence more or less frequently. This variation is at present of negative value, since I have been unable to visit their previous places of residence. What is positive is that I do find this association of ill-health and soil where the subject has remained constant in residence. From tin also, and from aluminium, as also from certain foods, I can trace this same morbid condition.

Underground streams appear to play an important part in rheumatic affections, and as in the case of malignant growths the two are almost invariably associated, also in the case of insomnia, although to a lesser degree. That is no doubt due to the fact that insomnia is so frequently of purely psychological origin. But in both complaints I have had great success by the removal of the subject from the affected area. Particularly has this been so in the case of rheumatism.

In all these treatments diet plays an important part, and it is most essential, I believe, that a correctly balanced diet be worked out by the method I outlined in the early part of this lecture. Do not be misled by the subject saying: "Oh, but I have eaten, or drunk, that for years and it has never hurt me," because you will probably find a negative reaction in apparently most harmless things, which nevertheless may be harmful under certain conditions of ill-health. Your resultant diet will also most likely be a somewhat drastic one, but you will be able to amplify it somewhat by increasing the range of your examination, for instance in fruits, and you will find many healthy articles of diet among things which are not in general use. Therefore do not restrict your examination to such things as are in general use in the subject's household only.

There is also a useful field for the Dowser in the determination

of sex, of the progress of gestation, and the condition of the foetus, both in animals and in human beings, but although I have done a considerable amount of work in this direction, it is, I feel, somewhat outside the scope of a general lecture. But for those who wish to make some experiments upon their domestic animals I would merely mention that a negative reaction indicates the female, and the male gives a positive reaction. In the case of the family cat you will no doubt obtain several such reactions, and there you have an interesting field for practice, because in such a small animal your calculations will have to be most fine and exact.

I have tried to give you a very broad, and consequently very cursory, survey of this most important subject. To particularise would take much more time than we have at our disposal, but I hope I have said sufficient to interest some of you in this field of Dowsing activity. It is as yet only in its infancy, but I am certain that the time is not far distant when it will be recognised as an important addition to our study of health. Greater co-operation of the Dowser and the Medical Profession is highly desirable, and already this is being obtained on the Continent. I hope that we in this country will not be slow to follow their example. Finally, I would warn you against too hasty generalisation, or of accepting the results of other Dowsters as necessarily correct in your own case. My own standards and methods have been built up, step by step, over a very long period, and are the results of some hundreds of examinations, and I can assure you that success cannot be attained without taking infinite pains. But if you will study this branch of Dowsing closely and conscientiously you will be most amply rewarded, for you will be enabled to bring health and happiness to many sufferers.

MAGNETIC HEALING

By FANNY HOPE WALTER

I first discovered my gift of healing five-and-a-half years ago. A friend of mine was receiving treatment, and I induced my sister to have treatment for nerves. One day my friend asked me to show her what the healer did whilst treating my sister, and when I showed her, I found I was healing, and very definite vibrations were passing through me to my friend. Since then I have helped many folks.

My treatment is as follows: The patient first sits on a stool and I kneel at the back of her, placing one hand on the solar plexus and the other at the base of the spine; this tunes in to the nervous system. After this I place the tips of my fingers on the nerves at the top of the spine and go right down the spine. If any special part needs treatment the tips of my fingers tingle,

and if there is bad congestion or any disease I feel the pain in my fingers travelling up to the top of my arm ; then I just shake it out and continue until I draw out all pain.

After I have finished the spine I place my hands on the head of my patient, and if any part of the head needs treatment my hands vibrate and the spot needing treatment most makes quite a knock, almost like a tiny pneumatic drill.

After the head I place my hands all over the body and if any part needs treatment the same vibration occurs, and by keeping my hand there I relieve pain, move congestion and generally tone up the whole body. This does not in any way deplete my strength ; in fact, the more I give the more I receive. The last three years (December, 1936) I have given over twelve hundred treatments each year, with good results.

I look forward to the time when the medical profession will link up with magnetic healers, as this is the oldest and natural form of healing. Folks sometimes tell me I am uncanny. I answer "No." I am perfectly natural. It is one of nature's laws, tuning in to the infinite and drawing vibrations from the etheric waves.

Sometimes when healing I feel an ice-cold feeling down my arms and in my hands, and the patient feels frozen in the one spot. It seems to me that nature supplies any ray that is needed.

When I first started I did not understand anatomy, so one must rule out the sub-conscious mind ; also my patients do not tell me where their pains are. My hands divine disease as a diviner divines water, &c.

I have had cases of heart trouble, nerves, goitre, rheumatism, sciatica, lumbago, severe neuralgia, arthritis, deafness, pneumonia, asthma, gout, kidney trouble, shingles, &c., and all have benefited. I promise nothing, and if I did not obtain good results patients would not come to me for treatment.

NOTES AND NEWS

Mr. F. E. Bramley (B.S.D.) assisted in the recovery of the body of Mrs. M. E. Keeton from the Sutton-in-Ashfield Reservoir, Mansfield, last December. On October 23rd Mrs. Keeton had left home with her two-years-old child. Next morning her hat and the body of the child were found floating in the reservoir. The police dragged the reservoir and partly drained it without result. On November 14th Mr. Bramley offered his services. Using a rod and one of her hats he traced Mrs. Keeton's footsteps for half-a-mile from where she got off a bus to the spot where she entered the reservoir. Having obtained intersections with a pendulum from points on the bank he located the exact spot with a rod from a boat. Apparently the police got the body

partly up the following day, but it slipped off the drags and the position was lost. On December 10th, seven weeks after Mrs. Keeton had disappeared, Mr. Bramley again located the position of the body—about ten feet from the original spot; dragging was carried out but without result. Two days after the body came up at this spot, having apparently been loosened by a gale.

On December 3rd Mr. Bramley was engaged by the Chesterfield Police to trace Mrs. Hepworth, who had disappeared with her two children twelve days previously. The children's bodies had been recovered from the canal, but there was no sign of the mother. Mr. Bramley was badly hampered by a crowd of some 2,000 spectators, but, using the mother's hat as a sample, he was able to trace her footsteps down the street, over a foot-bridge, across a railway, along the centre of the towing path to the edge of the canal. He indicated the exact spots where the children's bodies had been withdrawn. Using a pendulum he obtained an intersection for the position of the body and then got indications with a rod over the spot from a punt. The police failed to recover the body, probably because the bottom was thick sticky mud and the drags were blunt. After six days, when a new type of drag was being employed, the body was recovered a few yards from the spot indicated, having no doubt been moved by the previous efforts to withdraw it.

* * * * *

As reported in the *Morning Post* of January 12th Mr. J. Clarke (B.S.D.) and Mr. Dave Bailey endeavoured to trace the school girl, Mona Tinsley, using a shoe as a sample, by searching the banks of the Chesterfield Canal at Welham. They selected spots within 20 yards of each other. Search was also made by Mr. Thomas East, who used a sock as a sample.

* * * * *

According to the *Cambridge Daily News* of January 8th Mr. Charles Adams located a water supply for Over yielding some 50,000 gallons a day. An installation with pumping plant, filter beds, chlorinator and water tower has been completed.

* * * * *

As described in the *Sheffield Telegraph* of January 19th, Mr. John Edward West, of Upton, near Gainsborough, attempted to locate a miner, Mr. A. C. Roberts, who had been missing since November 4th. Using a hazel twig, with a waistcoat as sample, and travelling in a car, Mr. West was first led to a convalescent home in Leeds, where Roberts had received treatment ten years before. He continued the search in the Bradford district.

* * * * *

In the Army Museum at Vienna is preserved the wooden divining rod used by Lieut.-Colonel Beichl, of the Austrian Engineers, for finding springs for the water supply of the troops during the Great War—when he was "often accompanied by Field Marshal Archduke Eugene."

CORRESPONDENCE

CANCER RADIATION.

(Copy of letter from Dr. Oscar Brunler to Mr. G. D. Whiteman in reply to one drawing his attention to Mr. Langelaan's lecture to the Dowsers, in which Dr. Brunler was quoted as saying that cancer did not radiate, Dr. Dudley Wright having remarked at the close of the lecture that cancer did radiate strongly).

Sunday, Dec. 13th, 1936.

Dear Mr. Whiteman,

Thank you so much for your letter of the 9th inst. When a person develops cancer, the radiation in the whole body reduces, while the *tumour*—which is in fact like a parasite—draws all the radiation together and thus *radiates* most intensely.

I have had a large number of cancer cases lately, and proved this in each and every case. I quite believe that certain clairvoyant persons cannot see the radiations from the cancerous tumours. They see the radiation of the etheric body, but not the ultra-violet radiation of the material. The tumours draw the ultra-violet radiation from the whole system and the cells gain so much strength that they can split up and increase in number, thus forming the growth.

It may be interesting to the members of the Dowsers' Society to be further enlightened on this point.

I separate clairvoyance from purely scientific proofs. What cannot be proved by scientific methods can sometimes be proved by clairvoyance, and vice versa; and in many cases the two combined give a clearer understanding of the problems we have to face and try to solve.

With kindest regards,

Yours sincerely,

OSCAR BRUNLER.

GUYON HOUSE,
98 HEATH STREET,
LONDON, N.W.3.

13th September, 1936.

DEAR SIR,

I am preparing for early publication a new book on Dowsing, intended to bring up to date and supplement *The Divining-Rod*, by the late Sir William Barrett and myself. I propose to devote one section of this book to brief accounts of all living dowsers of whom I can obtain particulars. May I therefore appeal to such of my fellow members as are themselves dowsers, whether professional or amateur, to send me concise autobiographies for this purpose? I should like each statement to include (1) an account

of how the faculty emerged or was discovered; (2) a detailed account, accompanied, if possible, by names, plans, &c., of the dowser's best performance; and (3) an account of the dowser's theory of "how it works" in his or her own case.

I should also be very glad to have mistakes in *The Divining-Rod* pointed out to me. I need hardly say that all help and information will be most gratefully received and acknowledged.

Yours faithfully,

THEODORE BESTERMAN.

REVIEWS

THE PHILOSOPHY OF RELIGION VERSUS THE PHILOSOPHY OF SCIENCE.

By Albert Eagle (obtainable through all booksellers from Simpkin Marshall Ltd., 5/-).

This book has nothing to do with dowsing, but it is worthy of the attention of all thinking people in that it deals with matters which are almost invariably ignored by the ordinary scientist.

The keynote of the book is the necessity for recognising the existence of a spiritual element in all physiological growth, for, as the author says, "There is not present in the germ cell that develops into any of the higher plants or animals, just after it is fertilised, the slightest indication of the structure of the individual it is destined to produce." He postulates as the real and fundamental cause of growth a duplicate non-material body "which is continually tending to bring the physical body into equilibrium with its own size, shape and nature."

He believes that the "next" world exists in our own three dimensional physical universe, and that it is a world of non-material substances—the matter composing the bodies of men and animals after they have dropped their physical bodies.

The author does not believe, as do many psychologists, that the human being is composed of mind and body alone, but holds that the seat of consciousness is the "Inner Ego," whilst memory and knowledge find their abode in what is usually called the mind.

Certain modern scientific theories such as relativity, and the principle of indeterminacy are ably criticised, whilst many of the statements made in certain popular books of science, which tend to mystify rather than illuminate, are treated with the contempt they deserve.

This book is well worth reading, though there is much in it with which one cannot agree.

A.H.B.

COMMENT J'OPÈRE,

BY L'ABBÉ MERMET.

On sale at the Maison de la Radiesthésie, 16 Rue Saint Roch, Paris.

This book has now reached its 30th thousand, proof alike of the growth of interest in dowsing, and of the high standing of the author in the art of which he is the acknowledged Grand Master. More than half his space is devoted to a record of his experiences, and valuable as these are, especially his failures and the reasons for them, I must leave them to speak for themselves. I must also refer readers to the book for details of his method, assuring them that it deserves close attention.

The Abbé appears to be able to locate, or if necessary to trace, literally anything provided it has a physical basis. *Inter alia*, he can trace a dead body, diagnose cause and seat of disease, locate with all necessary particulars water, oil, minerals and other substances; he can even deduce a tiger from a photo of its pug. He works with equal ease on the spot, or at a distance; indeed, his most assured work is done in his study, free from external influences, and he now checks all outdoor work in his study before giving a definite opinion. The great advantage of outdoor work is that the dowser, by putting down pegs, ensures that work is actually done on the spot he indicates. The Abbé is not, however, a miracle worker; he requires clues, though in this respect he is far less exigent than even Sherlock Holmes. To make a location at a distance he requires a reasonably accurate map of the country and to locate a body he requires in addition some article which will enable him to sense the individuality of the defunct.

He works only with the pendulum, which is less violent in action than the rod, and capable of giving more information. Though agreeing that colours can be used as an aid, he does not use them, since his method is more certain in its results.

The Abbé's hypothesis (he is careful to state that the time is not yet ripe to formulate a theory) is that all bodies radiate, producing a field analogous to a magnetic field. The constituents of the field are:—

1. Magnetic surfaces or lines. Seen in plan an isolated body is enclosed by a series of circles, and a continuous body, (*e.g.*, stream) by a series of parallel lines corresponding in number to the characteristic figure of the substance. That of water is 7. Approaching a stream 7 lines of force are crossed, of which the outermost and the central give the strongest reactions.
2. Fundamental ray.—Every substance has its individual ray, which can be identified by the compass bearing of its direction, which (except in the case of gold) is constant. Its length varies with the mass of the body.

3. Capital (or mental) ray.—A ray direct from the substance to the operator's brain; in other words the uniform radiation given off by any body can be picked up by a brain placed *en rapport* with that body in any direction at any distance.
4. Luminous (or solar) ray.—The beam of light from any source acts as a conductor for the radiation of the body. Thus anywhere cutting the line between a lamp and a silver coin, the pendulum gives the characteristic figure of silver.
5. "Sample" ray.—This connects any two bodies of the same substance; it is used by those who work with samples.
6. Vertical (or ascending) column.—Vertically above or below a body the pendulum gives the characteristic reaction, except in the presence of magnetic disturbances, when the column is broken up into will o' the wisp images.
7. Images.—These are a sort of mirage, pronounced in times of storm or in full sunlight. They give the right information in the wrong place. Normally they do not last long before being resolved into the vertical column.
8. Characteristic figure and sense of rotation.—On each substance the pendulum gives a specific number of oscillations, followed by the same number of gyrations. For water the number is 7. For some substances the rotation is clockwise, for others counter clockwise. The combination identifies the substance. Some good dowzers affirm that these figures are personal, but as a result of experience with pupils, the Abbé maintains that anyone who by practice reaches his standard of control will find they are universal.
9. Spirals.—Over (or under) the line of the fundamental ray the pendulum describes a series of spirals in groups of three separated by a halt. The total number of the series is the same as the characteristic figure. Thus for gold (11) the series is 3.3.3.2.
10. Pendulary design.—In practised hands the pendulum describes the form of the body. Thus over a pair of scissors it will describe two circles and a straight line.
11. Variation of weight.—Over certain substances (*e.g.*, liquid petroleum) the pendulum seems to increase in weight and to drag; over others (*e.g.*, oil gas) it grows light and seems to float.
12. Fading.—As in wireless, in times of storm or earthquake and sometimes without apparent cause, the pendulum goes on strike. These periods are generally short, and it is best to wait their passing. There are some palliatives.

The Abbé holds that the dowser's art lies in the borderland between the physical and metaphysical; he scouts the idea that it has any relation with the occult. This is probably correct, as the miracle of to-day is the accepted fact of to-morrow, but his readers will agree that it will be a long time before science evolves apparatus to check this hypothesis. In one place the Abbé states that a few ultra-sensitives can actually see the water or other object which they seek, but that he has not this gift. This statement seems to furnish a clue. I suggest that the Abbé's sub- (or super-) conscious self does actually see, and that his system is a method, evolved by long practice, of communicating the vision to the conscious self. This does not mean that it is a purely arbitrary code; it probably bears the same relation to reality as do the formulæ of mathematicians, and can equally well be used by all who have been trained on the same lines as the Abbé to an equivalent standard.

It is a relief to turn from the quicksands of speculation to solid ground, and that I do in assuring readers that *Comment j'opère* is a book which no ambitious dowser can afford to miss.

H.M.E.

VÉRITÉS SUR LE DIAGNOSTIC RADIESTHÉSIQUE MÉDICAL.

By Dr. Alfred Roux de Vichy.

This is a remarkable book and one which, if it does not actually break new ground, at any rate gives some new aspects of the subject.

The author, a medical man practising in Vichy, herein gives an account of his experiences with radiesthetic diagnosis during the past three years in which he has put it into practice.

The book bears a short preface by Vicomte Henry de France, and upon this follows an introduction by the Author, in which he is careful to point out the difference, formulated by the Vicomte, between radiesthesia, which is essentially based upon reflexes of the hands, previously put into a state of unstable equilibrium, and assisted by the usual dowser's instruments, and teleradiesthesia, also called mental, or intuitional radiesthesia, which has to do with the range of perception without limits. In this the state of unstable equilibrium is not necessary, and instruments, and even the use of the hands, can be dispensed with; the response to the question proposed arising instantaneously in the mind of the subject.

The latter method is much more difficult of accomplishment than the former, and is not within the range of the majority of practitioners of radiesthesia.

It is as well that these definitions should be tabulated, as so many of the examples of diagnosis given in the book are instances of the second method; therefore, for the neophyte at least, it is essential that the distinction should be clearly established.

From all that the Author narrates of the medical cases examined by himself, it is evident that he has a high degree of radiesthetic faculty, for the precision of his diagnoses made from photographs, writing, or specimens of blood, subsequently confirmed by clinical, and often by operative measures, stamps him as a perfect ace in the field of teleradiesthesia.

But, in spite of his refined perception, he strikes a warning note in admonishing his readers never to rely entirely upon radiesthetic measures, but to carry out at the same time the usual clinical or physical examination. This is certainly a necessary caution, for the field of radiesthesia is beset with many pitfalls for the unwary.

It would appear that the Author's frequent exercise of his powers had so enhanced his efficiency that a further extension of this super-normal faculty was eventually added in that he could clairvoyantly see the organs of the body, as the following extract indicates:—

"One day, when examining one of my patients, the idea came to me to outline the contours of the liver with a pencil, and afterwards ascertain by means of the phonendoscope whether the demarcation thus made with the pendulum was correct. To my great surprise I found that I was able to do this by direct vision as precisely as by means of the phonendoscope or pendulum. I therefore continued from that date to make a daily practice of marking out the positions of the organs without an instrument. It goes without saying that I ascertained by means of clinical procedure to what extent I am correct. I was not in error more than once or twice."

Dr. Roux further states that for more than a year, whenever he had occasion to treat anyone gravely ill, he has put himself into touch with the patient through thinking strongly of him, and by means of the pendulum he has been able to ascertain his passing condition, whether for better or worse, and has been able to verify over and over again the information so obtained.

An example of this is as follows:—

"One day, being with a friend, I suddenly thought of one of my patients, whose condition had been causing me considerable anxiety. I took out my pendulum, and put myself 'en rapport' with him. For some moments it remained absolutely still; it was a most unusual occurrence in this type of experiment. I made a note of the time: it was exactly ten o'clock in the morning. Two or three minutes later, having resumed the experiment, I found that the pendulum gyrated feebly at first, and then showed

progressively stronger and stronger gyrations, and finally they evinced a normal amplitude.

"I attributed the initial inertia of the pendulum to the fact that she had a syncope for some moments, and had then recovered rapidly, and eventually regained her normal state.

"It had been arranged that I should visit her the same day towards mid-day. On entering the house, I put the following question to her daughter, who admitted me: 'What happened to your mother at 10 o'clock to-day?'

"She gave me a look of surprise, and said: 'But how did you know anything had happened at that time? As a matter of fact, I thought I had lost her; she had a bad fainting attack, and became the colour of a corpse, and did not recover for some minutes. I noticed the time, and it was exactly ten o'clock.'"

Details of another similar occurrence are given. The attention of those who are in the habit of working with the pendulum on photographs should be drawn to the following remarks:—

"I have noticed that on photographs of persons the pendulum gave positive or negative gyrations according to the sex, and that these gyrations were more or less ample in proportion to their good or deficient health. On the contrary, when it concerned persons who had died the pendulum remained inert.

"The same reactions were produced over the photos only representing the head of a living person on condition that the head had not been detached from the photo, but was a direct print from the negative."

Finally, the following remarks are worthy of note:—

"From my own experiments I can say that my results are the more exact as they are acquired in the following ways, in the order given—

- | | |
|--------|---------------------------|
| First | The writing of the person |
| Second | The photograph |
| Third | The blood |

How does this anomaly arise? May it be that writing reflects more clearly the character of the person; in a word, his habitual and constitutional state. The photograph preserves to a lesser extent the radiations of the brain or the thoughts, and the blood simply translates a passing condition which may be modified by the régime, digestion, fatigue, repose, and such-like temporary circumstances."

There are many other interesting points, chiefly of a medical nature, treated by the Author, who also gives details, and his method of working, but the above suffice to indicate that this work demands serious consideration, since it gives the carefully detailed results, and conclusions derived therefrom, by a physician of many years' standing, who holds, through his work and previous literary contributions, a well recognised place in the French Medical World.

D.D'A.W.

WÜNSCHELRUTE UND PENDEL

Dichtung und Wahrheit.

By Dr. H. Gachot. *A. Willm*, Niederbronn ; *B. Wepf und Cie*, Basel.

Dr. Gachot's book is very interesting ; and, though it will displease many, it is worth reading, as a fair statement of the point of view of those who admit the existence of certain dowsing phenomena, but who will yet not concede many of the claims of ardent dowsers.

The work is compiled from a series of lectures, given by the author, at the Strasbourg High School, in the winter term of 1935-36.

After a very brief account of the past history of the diviner's rod, he passes to chapters on the working of the rod, the history of the pendulum, and the motions of the latter. He believes that practical results have been obtained by the use of the rod, giving a few examples of actual successes of experienced dowsers. For further examples of actual positive results he refers readers to the *Handbuch* of v. Klineckowstroem and v. Maltzahn. A short chapter is devoted to a discussion of the causes of susceptibility of the dowser, and, while he admits that there is an actual dowsing reaction in certain places, he thinks that there is much doubt as to the nature of the original causes of the reaction. He does not join in the belief, held by many celebrated dowsers, that dowsing is possible to the great majority of mankind, but thinks that the power is restricted to certain types, which, in that respect, are abnormal. He thinks that the pendulum will vibrate for everyone, and that, in all cases which he has seen or heard of, it has been entirely due to auto-suggestion.

The above lines will give a brief idea of the scope of the first half of the book ; after which he gives a short scheme for investigations. He then passes to a review of such investigations.

According to his account, whenever a series of experiments has been made, the results, on collation, are such as would be expected from the theory of probability. He does not attempt to hide his scorn of the readers of maps and plans, and of the workers with colours, giving examples of complete failures in their results. In fact, the latter half of the book is devoted, in the main, to showing not only the different developments of dowsing, but also the different ways in which they have failed.

On pages 108 and 109 he concludes with a summary, of which one paragraph will give his point of view as follows :—" Looked at as a whole, the help given by the diviner's rod to the knowledge of the structure of the earth's crust, and to the discovery of the useful deposits, is so very small that one can say, with confidence,

that the science of geology in the widest sense of the word can easily dispense with the diviner's rod, while the latter, without geological interpretation and evaluation of its indications, is useless. An exception to this is its use in the detection of strong 'zones of reaction,' but these lie outside the field of practical geology."

Sufficient has been said to show that this book will meet with great opposition from many dowsing quarters; but it is of great interest, in that it fairly sets forward the arguments which are in common use to refute the views of many dowzers. In conclusion, it may be said that Dr. Gachot gives chapter and verse for many of the experiments which he advances to prove his case.

DAS WÜNSCHELRUTENPROBLEM

Experimentelle Untersuchungen über biologische Wirkungen der sogenannten Erdstrahlen.

By Dr. Ed Jenny, Ing. A. Oehler, and Dr. H. Stauffer, Aarau.
(A reprint from the *Schweizerische Med. Wochenschrift*, 66, 1936, Nos. 21, 22 and 24). Published by Benno Schwabe and Co., Basel.

The first part of this pamphlet is a reprint of a paper read by Dr. Jenny to the Natural History Society of Aarau. He deals very briefly with the history of the diviner's rod, and proceeds at once to a discussion of the rod, pendulum and other motor methods of indication.

In support of his theory that the reaction phenomenon is caused by involuntary muscular motion he brings forward (pp. 5-6) an experiment with coloured lights by Ehrenwald at Vienna. This experiment produced different muscular reactions by the action of different coloured lights on a blindfolded subject.

He discusses briefly the sensory methods of indication and gives an interesting extract (pp. 6-7) from an account by Zschokke of the physiological reactions of Katharine Beutler, a famous dowser at the beginning of the 19th century; and, in reference to the dowsing faculty, he agrees with Darder and Mermet that the great majority of mankind (75 per cent. or more) is sensitive.

He is a thorough follower of Wüst and Wimmer, who, he says, were the first to recognise the importance of the different sources of error.

He expresses great distrust of reading by maps and photographs and other clairvoyant claims of dowzers, which he says "belong to the province of para-psychology, but have nothing to do with the problem of the diviner's rod."

He also gives a good and short account of methods used in differentiation, depth measurement and the like.

In his short account of physical theories he mentions both Lehmann's work on potential differences, and Wüst and Wimmer's experiments. He says that he has tried Fortin and Müller's "Automatic spring finder," de Vita's electrometer, the Stehle-Futterknecht "Gerameter," and Dobler's photographic method, but cannot find any correlation with dowser's observations.

At the end of his paper is given a list of the books from which he obtained his information.

II.

Experimental work (with Oehler and Stauffer).

This second part of Dr. Jenny's pamphlet is of great interest.

A very vulnerable point in the dowser's work on the so-called "earth rays" is the fact that in very many cases the dowser has been called in after the actual physiological phenomena have occurred, and that in consequence his reactions may have been due to auto-suggestion. Dr. Jenny, in his experiments on plants and white mice, has sent the dowser ahead of the experiments, to detect the "zones of influence," and arranged his experiments across and in these zones accordingly.

In the plant experiments the results in 1933 were doubtful or negative in most cases; cucumbers alone gave a positive result. The authors say that they got positive results with maize in 1934-35, and give diagrams to illustrate and justify their claim.

Their conclusions are as follows:—

1. That there is an influence, upon plants, of the so-called "earth rays."
2. That white mice, as a rule, avoid "zones of reaction."
3. That tar carcinoma in white mice develops more rapidly, and is more malignant, over "zones of reaction."
4. That by different methods of insulation the effect of the so-called "earth rays" can be prevented.

The authors lay stress on the fact that they have no explanation of the working of the "earth rays," and that they cannot draw conclusions from their experiments as to the incidence of human carcinoma.

Altogether the paper is interesting and well drawn up, and there are many interesting diagrams, particularly in the section devoted to animal research.

**ZEITSCHRIFT FÜR
WÜNSCHELRUTENFORSCHUNG**

(July, August, September, October, 1936).

Dr. Franz Wetzel continues his arguments for the official recognition of the use of the diviner's rod. As before, he gives these arguments in the form of a conversation with a German nobleman, who recounts his successes with the rod in practical engineering work. He also contributes an article entitled "Progress in Switzerland in dowsing investigation." This article is, in the main, a review of the first part of Dr. Jenny's pamphlet which is reviewed in this number of the Journal. Dr. Wetzel has reviewed this part of the paper very fully, and with a natural appreciation of the importance of its publication in such a journal as the "Swiss Medical Weekly." He also reviews a pamphlet on cancer by Dr. Mannlicher, of Salzburg, *Auf dem Wege zur endlichen Lösung des Krebsproblems*, published by the Wissenschaftl. Gesellschaft für Hochfrequenz und Lichtforschung.

Dr. Raoul Braun-Fernwald reviews the work done in foreign countries. The main part of his review deals with work in France, which as usual has been prolific in publication.

August.—In this number a programme is given for a congress to be held at Bad Harzburg in September. Following the programme is a scheme for *viva voce* and practical examination of candidates who wish to be acknowledged professionally as dowzers.

Dr. Wetzel contributes a paper, "Biological investigations in dowsing during last year." After two pages of invective against the attitude of official science he proceeds to a review of Dr. Jenny's experimental results, reproducing a number of the striking figures illustrating the behaviour of animals and plants in "zones of reaction."

Dr. Braun-Fernwald contributes a full review of the March issue of this Journal. This reviewer must apologise to him for ascribing to him a statement which he had never made. The error was no doubt due to a misunderstanding of Herr Fritsch's statement. A short paragraph is also devoted by him to a review of work in Czecho-Slovakia, Austria and Hungary, and he also reviews Dr. Jules Regnault's book on Sorcery.

September-October.—This number deals with the work done at the congress held at Bad Harzburg from the 4th till the 6th September, at which were present representatives of the Department of Public Health and the Prussian Geological Institute.

In his report, Dr. Beyer said that the association would welcome accounts of positive results obtained with insulation methods, but that the rival claims of different manufacturers had led to

such disputes that the executive had resolved that the practical and commercial side of the question was outside its purview. However, the importance of the biological factor was recognised, and every endeavour would be made to promote further work in this direction.

The arrangement that had been made to conduct a series of tests with the Prussian Geological Institute had been temporarily abandoned.

From complaints of the publication of adverse reports, apparently official, on the problem of divining, it looks as if dowsing was still far from receiving official approval in Germany. The members of the Government departments present, however, took pains to explain that there was no definite official "drive" against dowsing. The whole of the proceedings show, however, that the leaders of the association think that while some progress had been made on the road to a recognition of dowsing by official science, yet that such recognition as has been received is not satisfactory.

The report reviewed above takes up 18 pages of the *Zeitschrift*, and Dr. Osswald then contributes a report of 35 pages on the investigations and examinations at Harzburg and Goslar. He gives all the results, whether right or not, which he says is an exceptional usage in the dowsing world.

All the tests were carried out compulsorily by the candidates for examination, and an endeavour was made to get for all the tests as many experienced dowsers as possible. Dr. Osswald shows disappointment with the entrance, as the following extract will show: "A number of inexperienced dowsers took part; while, on the other hand, only a few of the proved dowsers of the association were able to join in the investigations. The presence of these two factors has, no doubt, unfavourably affected the results."

In the Harzburg experiments many of the dowsers had had little experience of marking their results on maps, and there seems to have been great difficulty in judging the correctness of their results. In the Goslar experiments each stretch was pegged at every 20 metres, so that participants had little difficulty in accurately registering their points of reaction. In all cases care was taken that only one dowser was in a block at a time, and that those who followed were unable to see the reactions. This method functioned without friction, and commends itself for use in further investigations.

Dr. Osswald gives a full account of the necessary implements for laying out the ground, and the methods to be employed by the observing examiners (p. 157). Finally, before entering on a detailed description of the experiments themselves and of

their results, he gives a clear synopsis of the latter on page 164. The degree of accuracy (which in some cases is not high) is clearly shown, and Dr. Osswald observes, perhaps ironically, that opponents will not have to read any further, as these results will give them enough data for their attacks.

The remaining twenty-five pages of his paper are taken up with a very clear account of each experiment, and a detailed criticism of the results of each. The account is interesting, and is accompanied by several clear diagrams.

At Harzburg attempts were made to locate the position of a vein of iron ore, granite veins and points of crossing of a great fault. The results obtained with iron ore and with the great fault seemed to show that even inexperienced dowzers, after a little practice, could obtain reactions in these cases. In the case of the granite veins, although Dr. Osswald is not very satisfied with the results, he thinks that the partial failure may be due to some extent to unsatisfactory lay-out of the experiment, and also to inexperience and fatigue on the part of the dowzers.

In the Goslar experiments attempts were made to locate water and copper ore. In the case of the latter, the best results were got by experienced dowzers, but Dr. Osswald thinks, in view of the lack of experience of most of those taking part, that the results were satisfactory. In the second Goslar experiment, in which attempts were made to find the three strongest water veins out of a number crossed, most disappointing results were shown. Very little accuracy was shown in the actual fixing of the points at which water was known to cross the road, while, as Dr. Osswald says, the finding of water is the dowser's main subject. He cannot find any of the ordinary explanations (*e.g.*, fatigue or sleeplessness) and thinks that the failure was possibly due to over-confidence. In the third Goslar experiment trial was also made for water. In this case there seems to have been influence by an observer, whose presence was necessary for reasons explained by Dr. Osswald. In all other experiments care was taken to avoid such influence.

At the end of this paper Dr. Osswald gives a summary of desirable conditions for satisfactory observations, types of objects required, way of marking out the course, numbers taking part in each observation at one time, and so on. This summary should be useful to persons who desire to arrange for such investigations.

C.S.T.



SOME BOOKS ON DOWSING AND HUMAN RADIATION

- The Divining Rod*, by Sir William Barrett and Theodore Besterman : Methuen, 7/6.
- Water Diviners and their Methods*, by H. Mager (translation) : Bell, 16/-.
- The Modern Dowser*, by Le Vicomte Henry de France (translation) : 2nd Edition, Bell, 4/6.
- The Mystery of the Divining Rod Solved* (how to locate springs and to gauge depth), in two parts, by Ernest Christie, obtainable from the author : Pollingfold, Ockley, Dorking. Each part 1/-, postage 2d. The two post free, 2/8.
- The Art of Water Finding*, by M. E. Pogson : obtainable from the Hon. Sec. B.S.D., post free, 1/8.
- Local Variations in a Penetrating Radiation and their Connection with Water Divining*, by H. M. Budgett : obtainable from the Hon. Sec. B.S.D., -/6.
- Dowsing*, by Thomas Fiddick : obtainable from the author, The Cross, Camborne, Cornwall, -/6.
- The Human Atmosphere (the Aura)*, by W. J. Kilner : Kegan Paul.
- Les Sourciers et leurs Procédés*, by H. Mager.
- Traité complet des secrets de la Baguette et de la Pendule des Sourciers*, by Frère Padey, 65 fr.
- Le Sourcier Moderne*, by Henry de France, 5th Edition, 10 fr.
- Comment j'opère*, by Abbé Mermet, 4th and enlarged edition, 25 fr.
- La Radiesthésie* (explaining Abbé Bouly's method), by M. A. Capron, 15 fr.
- Comment devenir Sourcier*, by Armand Viré, 18 fr.
- Tu Seras Sourcier*, by Emile Christophe, 20 fr.
- Manuel théorique et pratique de Radiesthésie*, by René Lacroix-à-l'Henri ; Henri Dangles, 38 rue de Moscou, Paris (8^e), 20 fr.
- La Radio-Tellurie*, by M. Larvaron and Dr. J. Regnault ; Maison Deyrolle, 46 rue du Bac, Paris, 18 fr.
- Essai sur les Rayonnements de l'Homme et des Êtres vivants*, by C. Voillaume.
- Cours de Radiesthésie*, by Henri Lemonnier ; Maison de la Radiesthésie, 16 rue Saint-Roch, Paris.
- Investigación de aguas subterráneas*, by Bartolomé Darder Pericás.
- Handbuch der Wünschelrute*, by Carl Graf von Klinckowstroem and Rudolf Freiherr von Maltzahn.
- Die Wünschelrute*, by Hans Falkinger.